

M I Thabrew¹, P S Venkateswaran²

¹Dept of Biochemistry and Clinical Chemistry, Faculty of Medicine, University of Kelaniya, Ragama ²Div of Population Science, Fox Chase Cancer Centre, Philadelphia, Pennsylvania, U.S.A.

About 200 million people in the world are chronically infected with hepatitis B virus (HBV). Although several regimens of treatment are currently used on the basis of chronic antiviral or immunomodulatory activity of drugs, therapeutic agents with more specific activity against the HBV have yet to be developed. It was therefore of interest to determine if extracts of *O. aspera* and *M. maderaspatana*, used by indigenous medical practitioners in Sri Lanka for the treatment of viral hepatitis, could demonstrate under scientifically controlled conditions, any inhibitory actions on HBV.

An *in vitro* investigation has been conducted to assess the effects of aqueous extracts of *O. aspera* leaves and *M. maderaspatana* whole plants on the endogenous DNA polymerase (DNAP) activity of woodchuck (*Marmota monax*) hepatitis virus (WHV), an enzyme essential for its replication.

Results show that extracts of both *O. aspera* and *M. maderaspatana* can significantly inhibit *in vitro* the endogenous DNAP of WHV. Concentrations of 156 mg/ml of *O. aspera* and 625 mg/ml of *M. maderaspatana* were required to demonstrate 50% inhibition (IC₅₀) suggesting that *O. aspera* may demonstrate better antiviral activity than *M. maderaspatana*.

It may be concluded that *O. aspera* and *M. maderaspatana* contain compounds that can inhibit the replication of HBV thus rationalizing the ethnomedical use of these plants for the treatment of viral hepatitis.